Claims

1. A method of controlling production run sequences of insulating glass units, comprising:

a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;

b) monitoring a status of said runs at a production control workstation;

c) monitoring a status of one or more insulating glass component processing machines at the production control workstation;

d) monitoring a queue of insulating glass units to be assembled to sashes at the glazing lines at the production control workstation;

e) altering the sequence of runs at the production control workstation based on one of the status of the runs, the status of the one or more glass processing machines, and the queue of insulating glass units at the glazing line.

2. The method of claim 1 further comprising monitoring a status of runs of insulating glass components produced by the one or more insulating glass component processing machines and altering the sequence of runs of insulating glass units based on the status of the runs of insulating glass components.

3. The method of claim 1 further comprising monitoring electronic requests to prioritize a given run of insulating glass units at the production control workstation and altering the sequence of runs based on the request to prioritize the given run.

4. The method of claim 1 further comprising electronically communicating an altered sequence of runs to the one or more glass component processing machines.

5. A method of controlling production run sequences of insulating glass units, comprising:

a) creating a sequence of runs of insulating glass components to be produced for assembly into insulating glass units at an assembly station;

b) monitoring a status of one or more insulating glass component processing machines;

c) electronically communicating the status of the one or more insulating glass component processing machines to a production control workstation; and

e) altering the sequence of runs based on the status of the insulating glass component processing machines.

6. The method of claim 5 further comprising monitoring a status of runs of insulating glass components produced by the one or more insulating glass component processing machines and altering the sequence of runs of insulating glass units based on the status of the runs of insulating glass components.

7. The method of claim 5 further comprising monitoring electronic requests to prioritize a given run of insulating glass units at the production control workstation and altering the sequence of runs based on the request to prioritize the given run.

8. The method of claim 5 further comprising electronically communicating an altered sequence of runs to the one or more glass component processing machines.

9. A method of controlling production run sequences of insulating glass units, comprising:

a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;

b) monitoring a number of runs of assembled insulating glass units in queue to be assembled to window or door sash at a given glazing line of the plurality of glazing lines;

c) identifying a low queue condition at the given glazing line;

d) electronically communicating the low queue condition of the given glazing line to a production control workstation; and

e) altering the sequence of runs to resolve the low queue condition at the given glazing line.

10. The method of claim 9 wherein a low queue condition is automatically identified when the number of runs in queue at the given glazing line reaches a predetermined queue lower limit.

11. The method of claim 9 wherein the low queue is manually identified and entered into a programmable device by a glazing line worker.

12. The method of claim 9 wherein the number of runs of assembled insulating glass units in queue to be assembled to window or door sash at the given glazing line is monitored by identifying runs of assembled insulating glass units that are delivered to the given glazing line and identifying runs of assembled insulating glass units that are processed at the given glazing line.

13. The method of claim 12 wherein the runs of assembled insulating glass units that are delivered to the given glazing line and runs of assembled insulating glass units that are processed at the given glazing line are identified by scanning an identification label.

14. The method of claim 9 further comprising highlighting a next available run of insulating glass units that can be produced for the given glazing line on the production control workstation.

15. The method of claim 14 wherein the sequence of runs is altered by prioritizing a highlighted next available run for the given glazing line at the production control workstation.

16. The method of claim 9 wherein the sequence of runs is altered by prioritizing a next available run for the given glazing line when there is a low queue condition at the given glazing line.

17. The method of claim 9 further comprising tracking a number of low queue conditions at the given glazing line and adjusting a predetermined queue lower limit based on the tracked number of low queue conditions.

18. The method of claim 9 further comprising prioritizing a run of insulating glass units required by the given glazing line, electronically communicating the prioritized run from the given glazing line to the production control workstation, and altering the sequence of runs to produce the prioritized run of insulating glass units earlier in time.

19. The method of claim 9 further comprising preventing a sequence of production runs in progress from being altered.

20. A method of controlling production run sequences of insulating glass units, comprising:
    a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;
    b) prioritizing a run of insulating glass units required by the given glazing line;
    c) electronically communicating the prioritized run from the given glazing line to a production control workstation; and
    d) altering the sequence of runs to produce the prioritized run of insulating glass units earlier in time.

21. The method of claim 20 wherein the prioritized run is automatically identified when the number of runs in queue at the given glazing line reaches a predetermined queue lower limit.

22. The method of claim 20 further comprising identifying a low queue condition at the given glazing line, electronically communicating the low queue condition of the given glazing line to the production control workstation, and altering the sequence of runs to resolve the low queue condition at the given glazing line.

23. A system for controlling production run sequences of insulating glass units, comprising:

a) insulating glass component processing machines for producing assembled insulating glass units;

b) a plurality of glazing lines where assembled insulating glass units are assembled into window or door sash and

c) one or more controller or ancillary computer including a programmable device in communication with the window component processing stations and the plurality of glazing lines for:

i) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at the plurality of glazing lines;

ii) monitoring a status of said runs at a production control workstation;

iii) monitoring a status of one or more insulating glass component processing machines at the production control workstation;

iv) monitoring a queue of insulating glass units to be assembled to window or door sash at the glazing lines at the production control workstation; and

v) altering the sequence of runs based on one of the status of the runs, the status of the one or more glass processing machines, and the queue of insulating glass units at the glazing line.

24. A system for controlling production run sequences of insulating glass units, comprising:

a) insulating glass component processing machines for producing assembled insulating glass units; and

b) one or more controller or ancillary computer including a programmable device in communication with the window component processing stations and the plurality of glazing lines for:

i) creating a sequence of runs of insulating glass components to be produced for assembly into insulating glass units at an assembly station;

ii) monitoring a status of one or more insulating glass component processing machines;

iii) electronically communicating the insulating glass component processing machines to a production control workstation; and

iv) altering the sequence of runs based on the status of the insulating glass component processing machines.

25. A system for controlling production run sequences of insulating glass units, comprising:

a) window component processing stations for producing assembled insulating glass units;

b) a plurality of glazing lines where assembled insulating glass units are assembled into window or door sash; and

c) one or more controller or ancillary computer including a programmable device in communication with the window component processing stations and the plurality of glazing lines for:

i) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at the plurality of glazing lines;

ii) monitoring a number of runs of assembled insulating glass units in queue to be assembled to window or door sash at a given glazing line of the plurality of glazing lines;

iii) identifying a low queue condition at the given glazing line; and

iv) altering the sequence of runs to resolve the low queue condition at the given glazing line.

26. The system of claim 25 wherein a low queue condition is identified when the number of runs in queue at the given glazing line reaches a predetermined queue lower limit.

27. The system of claim 25 wherein the number of runs of assembled insulating glass units in queue to be assembled to window or door sash at the given glazing line is monitored by identifying runs of assembled insulating glass units that are delivered to the given glazing line and identifying runs of assembled insulating glass units that are processed at the given glazing line.

28. The system of claim 25 wherein the one or more controller or ancillary device highlights a next available run of insulating glass units that can be produced for the given glazing line on the production control workstation.

29. The system of claim 25 wherein the one or more controller or ancillary device alters the sequence of runs by prioritizing a next available run for the given glazing line when there is a low queue condition at the given glazing line.

30. A system for controlling production run sequences of insulating glass units, comprising:

a) window component processing stations for producing assembled insulating glass units;

b) a plurality of glazing lines where assembled insulating glass units are assembled into window or door sash; and

c) one or more controller or ancillary computer including a programmable device in communication with the window component processing stations and the plurality of glazing lines for:

i) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;

ii) prioritizing a run of insulating glass units required by a given glazing line;

iii) altering the sequence of runs to produce the prioritized run of insulating glass units earlier in time.

31. The system of claim 30 wherein the prioritized run is one of a rush run and a remake run.

32. The system of claim 30 wherein the prioritized run is automatically identified when the number of runs in queue at the given glazing line reaches a predetermined queue lower limit.

33. A computer readable medium for storing instructions for performing a method of controlling production run sequences of insulating glass units, the method comprising:
   a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;
   b) monitoring a status of said runs at a production control workstation;
   c) monitoring a status of one or more insulating glass component processing machines at the production control workstation;
   d) monitoring a queue of insulating glass units to be assembled to window or door sash at the glazing lines at the production control workstation;
   e) altering the sequence of runs at the production control workstation based on one of the status of the runs, the status of the one or more glass processing machines, and the queue of insulating glass units at the glazing line.

34. A computer readable medium for storing instructions for performing a method of controlling production run sequences of insulating glass units, the method comprising:
   a) creating a sequence of runs of insulating glass components to be produced for assembly into insulating glass units at an assembly station;
   b) monitoring a status of one or more insulating glass component processing machines;
   c) electronically communicating the insulating glass component processing machines to a production control workstation; and
   e) altering the sequence of runs based on the status of the insulating glass component processing machines.

35. A computer readable medium for storing instructions for performing a method of controlling production run sequences of insulating glass units, the method comprising:

a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;

b) monitoring a number of runs of assembled insulating glass units in queue to be assembled to window or door sash at a given glazing line of the plurality of glazing lines;

c) identifying a low queue condition at the given glazing line;

d) electronically communicating the low queue condition of the given glazing line to a production control workstation; and

e) altering the sequence of runs to resolve the low queue condition at the given glazing line.

36. The computer readable medium of claim 35 wherein the number of runs of assembled insulating glass units in queue to be assembled to window or door sash at the given glazing line is monitored by identifying runs of assembled insulating glass units that are delivered to the given glazing line and identifying runs of assembled insulating glass units that are processed at the given glazing line.

37. The computer readable medium of claim 35 further comprising highlighting a next available run of insulating glass units that can be produced for the given glazing line on the production control workstation.

38. The computer readable medium of claim 35 wherein the method further comprises tracking a number of low queue conditions at the given glazing line and adjusting a predetermined queue lower limit based on the tracked number of low queue conditions.

39. The computer readable medium of claim 35wherein the method further comprises prioritizing a run of insulating glass units required by the given glazing line, electronically communicating the prioritized run from the given glazing line to the

production control workstation, and altering the sequence of runs to produce the prioritized run of insulating glass units earlier in time.

40. The computer readable medium of claim 35 herein the method further comprises preventing a sequence of production runs in progress from being altered.

41. A computer readable medium for storing instructions for performing a method of controlling production run sequences of insulating glass units, the method comprising:

a) creating a sequence of runs of insulating glass units to be produced for assembly to window or door sash at a plurality of glazing lines;

b) prioritizing a run of insulating glass units required by the given glazing line;

c) electronically communicating the prioritized run from the given glazing line to a production control workstation; and

d) altering the sequence of runs to produce the prioritized run of insulating glass units earlier in time.

42. The computer readable medium of claim 41 wherein the prioritized run is automatically identified when the number of runs in queue at the given glazing line reaches a predetermined queue lower limit.

43. The computer readable medium of claim 41 wherein the method further comprises identifying a low queue condition at the given glazing line, electronically communicating the low queue condition of the given glazing line to the production control workstation, and altering the sequence of runs to resolve the low queue condition at the given glazing line.

44. A method of controlling production run sequences of insulating glass units, comprising:

a) creating a sequence of runs of insulating glass components to be produced for assembly into insulating glass units at an assembly station;

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b) monitoring a number of runs of completed insulating glass components in queue to be assembled into insulating glass units at the assembly station;

c) identifying a low queue condition of a given type of insulating glass component at the assembly station;

d) electronically communicating the low queue condition of the given type of insulating glass component to a production control workstation; and

e) altering the sequence of runs to resolve the low queue condition of the given type of insulating glass component.